## PATENT ABSTRACTS OF JAPAN

Refil

(11)Publication number:

05-207023

(43)Date of publication of application: 13.08.1993

(51)Int.Cl.

H04L 12/28

(21)Application number: 04-010764

(71)Applicant: HITACHI LTD

HITACHI MICOM SYST:KK

(22)Date of filing:

24.01.1992

(72)Inventor: HONMA KOICHI

OSHIMA KEIJI SUEKI MASAO

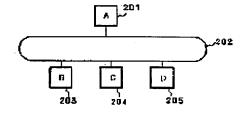
KASAMA TAKASHI KAGAWA TOSHIYA

## (54) MASS DATA TRANSMITTING METHOD

(57)Abstract:

PURPOSE: To secure reliability through simple procedure, and in addition, to attain the efficient transmission of mass data by transmitting continuously plural information frames by using a connectionless transmitting means.

CONSTITUTION: A system is constituted of a transmitter 201, a physical communication line 202 in which the information frame flows, and receivers 203 to 205. In this case, a means to transmit continuously plural data packets by using the connectionless transmitting means, and after that, execute the reception of a reception confirming packet or a retransmission requesting data packet and the transmission of a retransmitted data packet is provided. Then, the mass data is transmitted by using the efficient connectionless transmitting means in which the reliability is not secured, and after that, the transmission of the reception confirming, the retransmission requesting, and the retransmission requested data is executed by using the connection-oriented transmitting means in which the reliability is secured.



**LEGAL STATUS** 

[Date of request for examination]

12.11.1998

[Date of sending the examiner's decision of

23.04.2002

rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

```
S1
         1 PN=JP 5207023
?
T/35
  1/35/1
DIALOG(R) File 345: Inpadoc/Fam. & Legal Stat
(c) 2006 EPO. All rts. reserv.
11272661
Basic Patent (No, Kind, Date): EP 552794 A2 19930728
                                                    <No. of Patents: 007>
Patent Family:
   Patent No
                Kind Date
                                Applic No
                                            Kind Date
   DE 69328578
                   CO 20000615
                                   DE 69328578
                                                       19930122
                                                   Α
   DE 69328578
                   T2 20010201
                                   DE 69328578
                                                   Α
                                                       19930122
   EP 552794
                   A2 19930728
                                   EP 93100955
                                                   Α
                                                       19930122
                                                                  (BASIC)
   EP 552794
                   A3 19950524
                                   EP 93100955
                                                       19930122
                                                   Α
   EP 552794
                   B1 20000510
                                   EP 93100955
                                                   Α
                                                       19930122
    JP 5207023
                   A2 19930813
                                   JP 9210764
                                                   A 19920124
   US 5572678
                   Α
                       19961105
                                   US 8303
                                                       19930125
Priority Data (No. Kind, Date):
    JP 9210764 A 19920124
PATENT FAMILY:
GERMANY (DE)
 Patent (No, Kind, Date): DE 69328578 CO 20000615
   Leistungsfahiges und betriebssicheres ubertragungsverfahren und System
      fur grosse Datenmengen (German)
   Patent Assignee: HITACHI LTD (JP); HITACHI MICROCUMPUTER ENG (JP)
   Author (Inventor): HOMMA KOICH! (JP); OSHIMA KEIJ! (JP); SUEK! MASAO
      (JP); KASAMA TAKASHI (JP); KAGAWA TOSHIYA (JP)
   Priority (No, Kind, Date): JP 9210764 A
                                            19920124
   Applic (No. Kind, Date): DE 69328578 A
                                            19930122
   IPC: * H04Q-011/04
   Language of Document: German
 Patent (No, Kind, Date): DE 69328578 T2 20010201
   LEISTUNGSFAEHIGES UND BETRIEBSSICHERES UEBERTRAGUNGSVERFAHREN UND
     SYSTEM FUER GROSSE DATENMENGEN (German)
   Patent Assignee: HITACHI LTD (JP); HITACHI MICROCOMP ENGINEERING
      (JP)
   Author (Inventor): HOMMA KOICHI (JP); OSHIMA KEIJI
                                                         (JP); SUEK! MASAO
      (JP); KASAMA TAKASHI (JP); KAGAWA TOSHIYA (JP)
   Priority (No, Kind, Date): JP 9210764 A
                                            19920124
   Applic (No. Kind, Date): DE 69328578 A
                                            19930122
   IPC: * H04Q-011/04
   Derwent WPI Acc No: * G 93-236491
   JAPIO Reference No: * 170642E000078
   Language of Document: German
```

EUROPEAN PATENT OFFICE (EP)

S PN=JP 5207023

Patent (No, Kind, Date): EP 552794 A2 19930728

EFFICIENT AND RELIABLE LARGE-AMOUNT DATA TRANSMISSION METHOD AND SYSTEM

(English: French: German)

Patent Assignee: HITACHI LTD (JP): HITACHI MICROCUMPUTER ENG (JP)
Author (Inventor): HOMMA KOICHI HAKURAKU HAUSU (JP); OSHIMA KEIJI
(JP); SUEKI MASAO (JP); KASAMA TAKASHI (JP); KAGAWA TOSHIYA (JP)

Priority (No, Kind, Date): JP 9210764 A 19920124

Applic (No, Kind, Date): EP 93100955 A 19930122

Designated States: (National) DE; FR; GB

IPC: \* H04L-012/28

Language of Document: English

Patent (No, Kind, Date): EP 552794 A3 19950524

EFFICIENT AND RELIABLE LARGE-AMOUNT DATA TRANSMISSION METHOD AND SYSTEM

(English: French; German)

Patent Assignee: HITACHI LTD (JP); HITACHI MICROCUMPUTER ENG (JP) Author (Inventor): HOMMA KOICHI HAKURAKU HAUSU (JP); OSHIMA KEIJI (JP); SUEKI MASAO (JP); KASAMA TAKASHI (JP); KAGAWA TOSHIYA (JP)

Priority (No, Kind, Date): JP 9210764 A 19920124 Applic (No, Kind, Date): EP 93100955 A 19930122

Designated States: (National) DE; FR; GB

IPC: \* H04L-012/28

Language of Document: English

Patent (No, Kind, Date): EP 552794 B1 20000510

Efficient and reliable large-amount data transmission method and system Procede et systeme efficace et fiable pour la transmission de grande quantite de donnees Leistungsfahiges und betriebssicheres ubertragungsverfahren und System für grosse Datenmengen (English)

French: German)

Patent Assignee: HITACHI LTD (JP); HITACHI MICROCUMPUTER ENG (JP) Author (Inventor): HOMMA KOICHI (JP); OSHIMA KEIJI (JP); SUEKI MASAO

(JP); KASAMA TAKASHI (JP); KAGAWA TOSHIYA (JP) Priority (No, Kind, Date): JP 9210764 A 19920124 Applic (No, Kind, Date): EP 93100955 A 19930122

Designated States: (National) DE; FR; GB

IPC: \* H04Q-011/04

Language of Document: English

## JAPAN (JP)

Patent (No, Kind, Date): JP 5207023 A2 19930813

MASS DATA TRANSMITTING METHOD (English)

Patent Assignee: HITACHI LTD: HITACHI MICOM SYST KK

Author (Inventor): HONMA KOICHI; OSHIMA KEIJI; SUEKI MASAO; KASAMA

TAKASHI: KAGAWA TOSHIYA

Priority (No, Kind, Date): JP 9210764 A 19920124 Applic (No, Kind, Date): JP 9210764 A 19920124

IPC: \* H04L-012/28

JAPIO Reference No: : 170642E000078 Language of Document: Japanese

## UNITED STATES OF AMERICA (US)

Patent (No, Kind, Date): US 5572678 A 19961105

System for sending frames from sender to receiver using connectionless protocol and receiving acknowledging frame and retransmission request

frame from receiver using connection oriented protocol (English)

Patent Assignee: HITACHI LTD (JP): HITACHI MICROCOMPUTER SYST (JP)

Author (Inventor): HOMMA KOICHI (JP); OSHIMA KEIJI (JP); SUEKI MASAO

(JP); KASAMA TAKASHI (JP); KAGAWA TOSHIYA (JP) Priority (No, Kind, Date): JP 9210764 A 19920124

Applic (No, Kind, Date): US 8303 A 19930125

National Class: \* 395200120; 370060000; 364222200; 364284300;

364284400; 364DIG001 IPC: \* G06F-013/00

Language of Document: English